

Breakwater Study Released

by Ryan ZumMallen | Long Beach News | 07.23.09 |

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The study conducted by a local engineering firm determines several methods by which the breakwater could be modified, potentially re-introducing waves and earning the City up to \$52 million annually in tourism revenue.

A summary of the major findings reveals that engineering firm Moffatt & Nichol (commissioned by the City of Long Beach to produce the study) has found multiple ways in which the breakwater may be reconfigured in order to improve water quality and possibly even re-introduce waves to Long Beach shores.

In total, the report consists of a 162-page final analysis ([click here to download](#)), a 71-page project management plan ([click here to download](#)), and a 5-page executive summary ([click here to download](#)).

From the summary:

Summary of Major Findings

- The study identifies a number of potential solutions/alternatives to improve the ecosystem.
- Moffatt & Nichol identified five basic alternatives to analyze for potential costs and benefits.
- Complete removal of the breakwater is not recommended in the study as a feasible option, as there are too many negative impacts that cannot be effectively mitigated in a cost-effective manner.
- The study alternatives range in construction cost from approximately \$10 million to \$310 million.
- The study alternatives range from creating wave heights of 0 times to 4 times current size in some areas of the shoreline.
- The study alternatives can create up to 500 acres of kelp bed and up to 300 acres of rocky reef habitat from removed breakwater sections.
- The study does not conclude if there is or is not federal interest, as that function can only be performed by the Army Corps. The study does provide evidence that many of the alternatives considered could both restore the ecosystem and create recreational value.
- Some of the Breakwater reconfigurations have a potential for significant wave energy increases to existing Port infrastructure, THUMS oil islands, Navy anchorage, and City beaches that would require mitigation.
- If the goal is solely hard bottom habitat ecosystem restoration, then importing rock to create kelp beds and rocky reef habitat is most cost effective; however, that solution would not address the City's goals of improved water quality, renewing the City's beaches, or increasing wave activity.
- The City of Long Beach could gain increases of up to \$52 million per year in local spending and economic activity, and potentially up to \$6.7 million per year in taxes and parking fees and fines for the maximum recreation improvement scenario.
- By redirecting the mouth of the Los Angeles River, water quality could likely be improved along the shoreline with or without changes to the Breakwater.
- All five alternatives examined could provide significant ecosystem restoration and

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some had recreational benefits exceeding the construction costs; however, four of the five alternatives cost more to build than the SCE Wheeler Kelp Reef on a cost-per-acre basis, due to the costs of reconfiguring the Breakwater or building the LA River training structure.

- Moffatt & Nichol estimate that a Feasibility study phase (to be conducted by the Army Corps) would cost approximately \$7 million and take four years to complete. The City of Long Beach would be responsible for funding 50 percent of the cost of the study, which could consist of a mix of non-federal funding sources.

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